



STATE OF MARYLAND

DHMH

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May 30, 2008

Public Health & Emergency Preparedness Bulletin: # 2008:21
Reporting for the week ending 05/24/08 (MMWR Week #21)

CURRENT HOMELAND SECURITY THREAT LEVELS

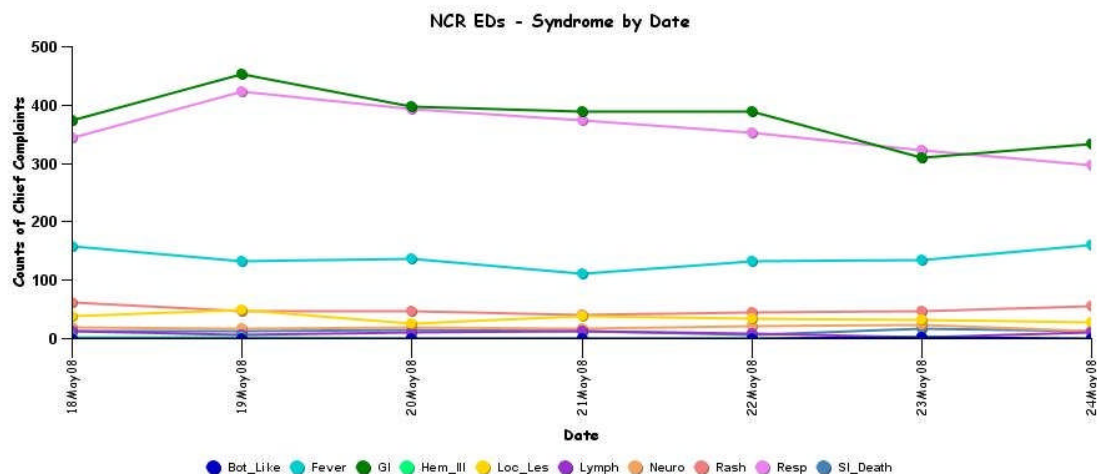
National: Yellow (ELEVATED) *The threat level in the airline sector is Orange (HIGH)
Maryland: Yellow (ELEVATED)

SYNDROMIC SURVEILLANCE REPORTS

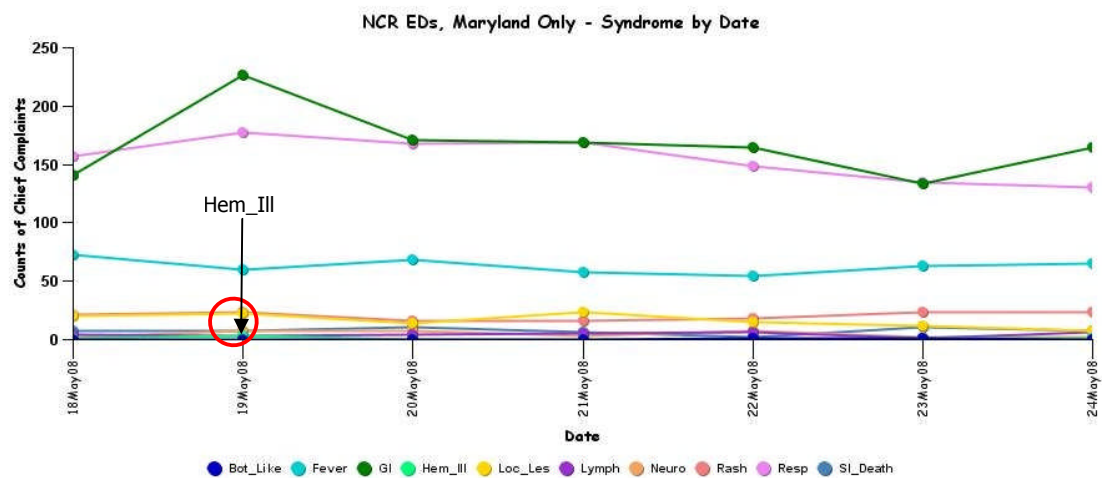
ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):

Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts only. Note: ESSENCE – ANCR Spring 2006 (v 1.3) now uses syndrome categories consistent with CDC definitions.

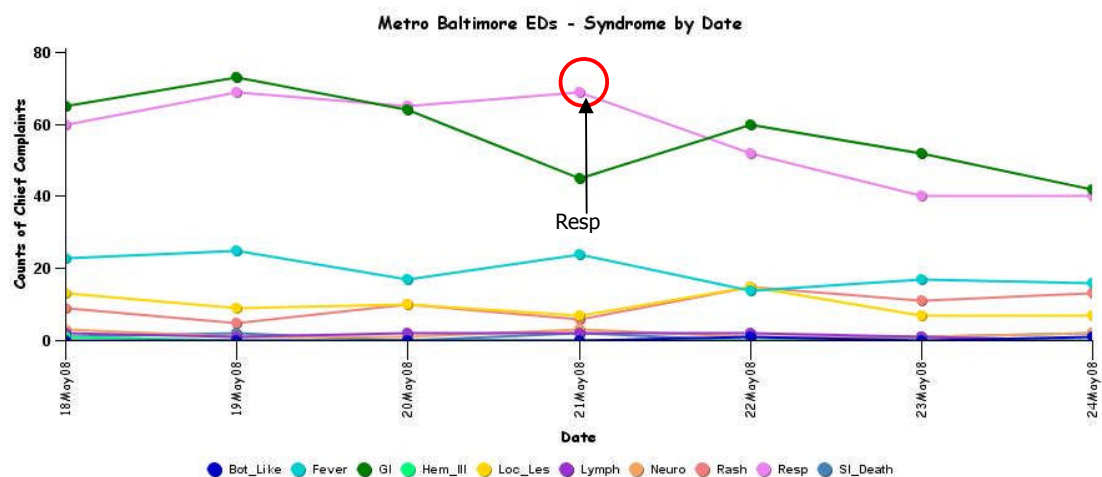
Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.



* Includes EDs in all jurisdictions in the NCR (MD, VA, DC) under surveillance in the ESSENCE system



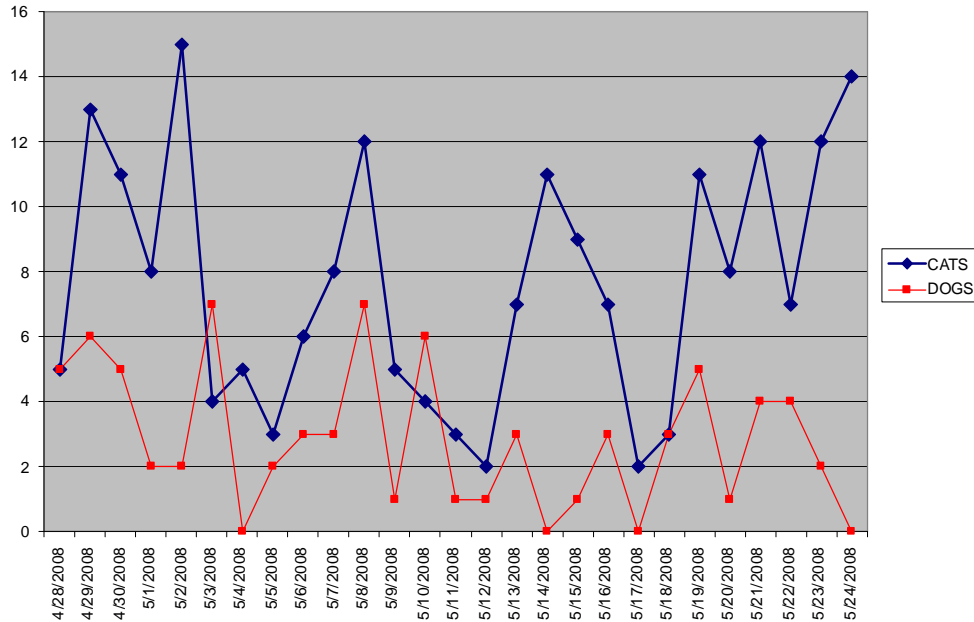
* Includes only Maryland EDs in the NCR (Prince George's and Montgomery Counties) under surveillance in the ESSENCE system



* Includes EDs in the Metro Baltimore region (Baltimore City and Baltimore County) under surveillance in the ESSENCE system.

BALTIMORE CITY SYNDROMIC SURVEILLANCE PROJECT: No suspicious patterns in the medic calls, ED Syndromic Surveillance and the animal carcass surveillance. Graphical representation is provided for animal carcass surveillance 311 data.

Dead Animal Pick-Up Calls to 311

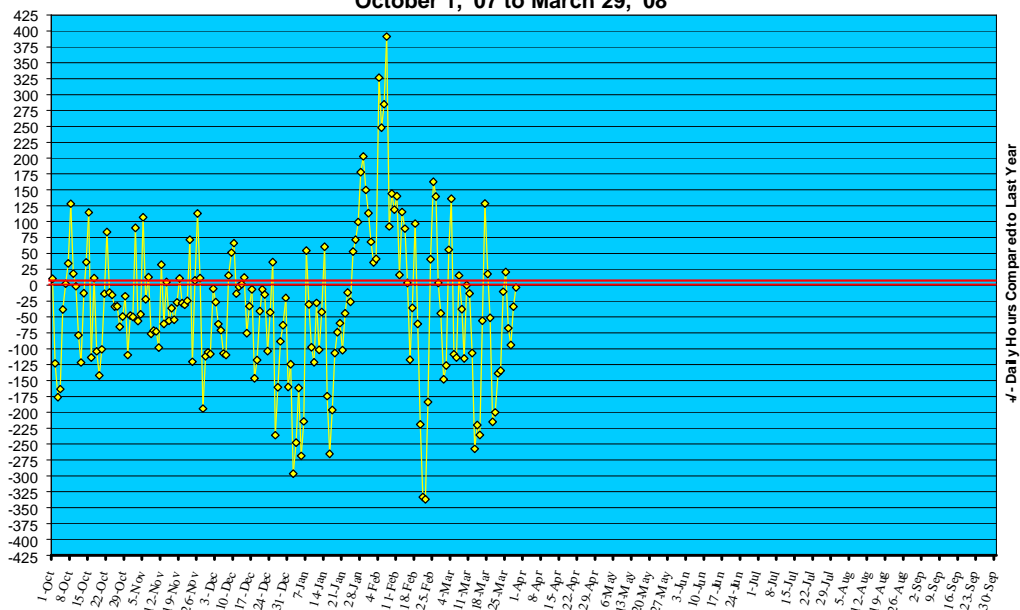


REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/06.

*Note: No new data available at this time.

**Statewide Yellow Alert Comparison
Daily Historical Deviations
October 1, '07 to March 29, '08**



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to BT for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in April 2008 did not identify any cases of possible terrorism events.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

Meningitis:	<u>Aseptic</u>	<u>Meningococcal</u>
New cases (May 18 - 24, 2008):	5	0
Prior week (May 11 - 17, 2008):	8	2
Week#21, 2007 (May 19 - 25, 2007):	4	0

OUTBREAKS: 4 outbreaks were reported to DHMH during MMWR Week 21 (May 18-May 24, 2008):

1 Gastroenteritis outbreak

1 outbreak of GASTROENTERITIS associated with an Assisted Living Facility

1 Foodborne Gastroenteritis outbreak

1 outbreak of FOODBORNE GASTROENTERITIS associated with a Plant Nursery

1 Rash illness outbreak

1 outbreak of RASH ILLNESS associated with a SCHOOL

1 Other outbreak

1 OTHER outbreak associated with a School

MARYLAND SEASONAL FLU STATUS:

Seasonal Influenza reporting occurs October through May. MMWR Week 20 was the last week of reporting for seasonal influenza. Maryland's influenza activity level was NO ACTIVITY.

SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS:

Graph shows the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. This graph does not represent confirmed influenza.



PANDEMIC INFLUENZA UPDATE / AVIAN INFLUENZA-RELATED REPORTS

WHO Pandemic Influenza Phase: Phase 3/4: No or very little human-to-human transmission/Small clusters with limited human-to-human transmission, suggesting that the virus is not well adapted to humans

US Pandemic Influenza Stage: Stage 0/1: New domestic animal outbreak in at-risk country/Suspected human outbreak overseas

*More information regarding WHO Pandemic Influenza Phase and US Pandemic Influenza Stage can be found at: <http://bioterrorism.dhmm.state.md.us/flu.htm>

WHO update: As of April 30, 2008, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 382, of which 241 have been fatal. Thus, the case fatality rate for human H5N1 is about 63%.

AVIAN INFLUENZA (Indonesia): 21 May 2008, The highest bird flu alert status has been declared in Rimbo Mulyo village in Rimbo Bujang district, Tebo regency, Jambi province on the east coast of central Sumatra, during the past 3 days after the sudden deaths of thousands of domestic birds in the area. The alert means local people, especially those living on Jalan 15 and Jalan 23, where the sudden deaths occurred, are obliged to report to the local community health center every hour as a precaution. The regency health office has set up a special task force to anticipate the possible transfer of the bird flu virus to humans by conducting door-to-door health checks. "We're also calling on all members of the community to report to the community health centers should their neighbors, friends, or family members become sick," head of Tebo health office Haflin said on May 20. Haflin said his office has worked hand in hand with the husbandry office to take preventive measures including providing veterinary vaccines, spraying disinfectant, and culling possibly infected poultry. Disinfectant has been sprayed and medicine distributed within a 1 km radius of the areas where the sudden deaths occurred, head of Tebo husbandry office Alfred said.

AVIAN INFLUENZA, HUMAN (Bangladesh): 24 May 2008, The World Health Organization on May 23 confirmed the first human case of bird flu in Bangladesh, a baby boy who has recovered, bringing the number of countries which have recorded human infections to 15. Bangladesh authorities announced the case on May 22, and the WHO said it had been confirmed by a laboratory at the U.S. Centers for Disease Control and Prevention in Atlanta. The 16-month-old boy was infected in January 2008 and has since recovered, he said. Bangladesh authorities informed the United Nations agency promptly about the case, but it took time for the international laboratory testing to be completed, Hartl said. The H5N1 virus was first detected in Bangladesh in March last year, and since then, the authorities have culled around 2 million chickens and destroyed more than 2 million eggs. Avian influenza has spread through 47 of Bangladesh's 64 districts, causing losses of about 650 million US dollars for the growing poultry sector, which accounts for 1.6 percent of the impoverished nation's gross domestic product. "When a disease is so widespread in poultry, it is really a matter of time before you get a human case. It shows the need to control the disease in animals if you are going to reduce the chances of transmission to humans," Hartl said.

NATIONAL DISEASE REPORTS:

PLAGUE, FELINE, MOUNTAIN LION (Wyoming): 22 May 2008, "Plague was confirmed in a mountain lion found dead in mid-April 2008 by a landowner in rural Johnson County," said Todd Cornish, an associate professor in the University Of Wyoming College Of Agriculture's Department of Veterinary Sciences. Cornish said this is the 5th case of plague confirmed in mountain lions in Wyoming in the past 3 years. The other 4 cases were in Teton County and the Greater Yellowstone Area of northwestern Wyoming. "Plague is an important consideration when mountain lions are found sick or dead in Wyoming and elsewhere in the western United States," Cornish said. Those who find sick or dead mountain lions or similar species, including bobcats, should avoid contact with the animals and are asked to contact the Wyoming Game and Fish Department (WGFD), Cornish said. "Appropriate personal safety precautions should be taken by wildlife professionals working in the field and diagnosticians working in laboratories when handling these animals or their tissues," he added. "Plague is a serious zoonotic disease capable of causing significant illness and even death in humans, as exemplified by a recent fatal case of plague in a wildlife biologist working at Grand Canyon National Park in Arizona," Cornish said. Wildlife biologists, wildlife veterinarians, public health officials, hunters skinning an animal with plague and the owners of domestic cats stricken with the disease are among those susceptible to plague. There have been one fatal and 4 non-fatal cases of humans contracting plague in Wyoming since 1978, said Karl Musgrave, state public health veterinarian with the Wyoming Department of Health. WGFD assistant veterinarian Cynthia Tate said: "Finding plague in animals such as mountain lions and bobcats, and occasionally domestic cats, is not surprising because they eat rodents, and rodents are the typical carriers." Tate cautions that animals having plague may not appear sick because the disease can kill rapidly. The incubation period of plague is between 2 and 6 days after exposure, she noted. If hunters or others develop flu-like symptoms within that period, they should call their doctor. (Plague is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

INTERNATIONAL DISEASE REPORTS:

BRUCELLOSIS, HUMAN, BOVINE, SMALL RUMINANTS (Azerbaijan): 18 May 2008, Brucellosis has been revealed in the village Niyazabad in the Khachmazskiy district in cattle and small ruminants; 14 inhabitants of the village have been infected. Muggedes Takhaev, deputy chief physician of the outpatient department in the village of Niyazabad, has stated that the disease was first detected on Mar 15 in 4 persons. Further investigations, carried out on May 8, have led to the discovery of 10 additional patients. The human patients have been treated. Animals had not been vaccinated, said Takhaev. (Brucellosis is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

BRUCELLOSIS, OVINE, CAPRINE (Russia): 18 May 2008, A total of 116 sheep and 12 goats have been identified as infected by brucellosis in the village Kuchuk of Altai krai. The cases have been confirmed by laboratory tests. The press service of the regional department of the Ministry of emergency situations informed about it to the correspondent of IA Regnum on May 14. Currently, the sick animals are isolated. All the yards are equipped with disinfection entry areas and the population is informed about the restrictions due to brucellosis. It is expected that these measures would not allow further spread of infection. Local veterinarians are working in the village. (Brucellosis is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

CRIMEAN-CONGO HEMORRHAGIC FEVER (Russia): 18 May 2008, A total of 18 cases of Crimean-Congo hemorrhagic fever (CCHF) have been registered in the South Federal District of Russia as of May 13. Of those, 2 patients have died. In 2008, 4 cases have been registered in Ingushetia (one fatality), 11 cases in the Stavropol Region (one fatality), and 3 cases in the Rostov region. All regions of the Southern Federal District have begun to treat the livestock with acaricide. But in some regions (Astrakhan region, Ingushetia) acaricide treatment has been insufficient. In the Astrakhan region only 2.9 % of cattle and 0.52 % of other livestock have been treated. Last year, there were 234 cases of CCHF in the South Federal District, with 4 deaths. In 2006, 200 cases were registered. (Viral hemorrhagic fevers are listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

DENGUE HEMORRHAGIC FEVER (Brazil): 19 May 2008, The state of Ceara in Brazil now has 17,384 cases of dengue confirmed this year. Most of the cases, 10 381 cases (73.7 percent), have been recorded in Fortaleza. The capital of Ceara also has 4 of the 9 deaths caused by this disease in the state. The other deaths occurred in Caucaia, Redemption, Oros, Itapipoca, and Quixada, one in each of these cities. Another 20 deaths suspected to have been caused by the *Aedes aegypti* mosquito dengue vector are still under investigation, according to the weekly newsletter released May 16, by the secretary of Health of Ceara. The secretary of health of Fortaleza, Odorico Monteiro, now admits that there is an epidemic in the city. Until last month, he spoke of a pre-epidemic of the disease, but the trend in numbers of dengue cases has been increasing, with a shift in the epidemic curve. In 2006, the highest concentration of dengue cases was in the month of July with 4000 dengue patients. Last year, there were 2000 cases in May and 3000 in April. After almost a month, the secretary of health of the state of Ceara, Joao Ananias, acknowledged that the state is facing an epidemic of dengue hemorrhagic fever (DHF). Several collective mobilizations to control and prevent dengue will hit the streets of Fortaleza on May 17. The work is being done by the Prefecture of Fortaleza. The effort to eliminate the breeding sites of the mosquito vector of the disease will mobilize the participation of the population and various sectors of the government. (Viral hemorrhagic fevers are listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

ANTHRAX, ELEPHANT (India): 21 May 2008, An elephant died of anthrax in Noam Range under Kalimpong forest division in West Bengal, India recently. Its body was recovered on May 18 and the examination of its blood sample confirmed that the pachyderm had died of anthrax. The forest department has started a thorough screening of the forests in North Bengal to find out whether any other elephants have died recently. (Anthrax is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

CLOSTRIDIUM PERFRINGENS, GAS GANGRENE (China): 22 May 2008, According to sources at the Chinese Center for Disease Control and Prevention (CCDCP) 30 patients in Sichuan University's Huaxi Hospital have been infected with gas gangrene. An isolation ward has been set up to prevent the disease spreading. All patients injured in the quake arriving at Huaxi Hospital will be sent to the isolation ward for diagnosis on arrival. Five patients diagnosed with gas gangrene disease on May 14 are in a stable condition, according to Shi Yingkang, the dean of Huaxi Hospital. Gas gangrene is a bacterial infection that produces gas within gangrenous tissue. People with open fractures are particularly susceptible. It is caused by the bacteria *Clostridium Perfringens* and if left untreated is usually fatal within 12 hours. Isolation of patients and effective disinfection can prevent cross infection. There have been no cases of cross infection in Huaxi Hospital so far. But rescuers in the quake-hit region have been warned not to make direct contact with survivors' skin, and to follow effective disinfection procedures. Experts from CCDCP say isolation wards should be set up in all hospitals receiving patients from the quake-hit area. All injured persons transferred from the quake area should be first sent to isolation wards to be checked for gas gangrene. If gas gangrene is suspected, treatment must begin immediately. Thoroughly cleaning wounds, removing foreign objects and dead tissue is the best way to prevent clostridium infection. (*Clostridium Perfringens* is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

CRIMEAN-CONGO HEMORRHAGIC FEVER (Turkey): 22 May 2008, In Istanbul, Turkey hospital workers said hundreds of the city's residents have flocked to hospitals after a Crimean-Congo hemorrhagic fever (CCHF) scare. Hospitals including Haseki, Okmeydani, and Haydarpasa Numune said more than 500 residents sought treatment during the weekend of May 17-18 for tick bites after a woman died of Crimean-Congo hemorrhagic fever that was thought to

have been transmitted by a tick bite in the town of Sivas. Doctors said they performed tests on the patients and told them to return if they suffer fever, headache, nausea, vomiting, or diarrhea. Istanbul Provincial Health director Mehmet Bakar said on May 19 that citizens should avoid contact with ticks whenever possible. "There has never been a CCHF incident in Istanbul. But this does not mean that there won't be one in the future," he noted. (Viral hemorrhagic fevers are listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

BRUCELLOSIS (Bosnia and Herzegovina): 23 May 2008, An alarming rise in cases of Bosnians infected with the rare animal disease brucellosis requires urgent action to prevent it from spreading, an epidemiologist warned on May 22 to Agence France-Presse. "The number of people who were registered with the infection this year is 395. The situation is very, very serious," said Zlatko Puvacic, the chief epidemiologist of the Muslim-Croat half of Bosnia. At least another 1000 people in the Muslim-Croat Federation had been infected by brucellosis but were not registered since they were yet to see a doctor, Puvacic estimated. A precise figure on those currently infected with the animal disease was unknown. Puvacic said health authorities "must urgently undertake measures to prevent further spreading of the disease." He called for the establishment of quarantine facilities for infected cattle, mainly sheep, and for the proper disposal of the remains of euthanized animals. "Otherwise the number of infected humans could be 2 to 3 times higher," said Puvacic. He said the situation is identical in the Republika Srpska, the Serb entity that along with the Muslim-Croat Federation makes up post-war Bosnia. (Brucellosis is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

CHIKUNGUNYA (India): 23 May 2008, Deputy Commissioner M Maheshwar Rao has said that over 4000 people are said to be suffering from chikungunya in the district. Addressing health workers and administrative officers at a review meeting in Mangalore on May 22 he said: "More than 2100 cases have been confirmed. The number of chikungunya cases is estimated at more than 4000." The district administration believed that the disease had spread to Sullia, Puttur, Belthangady, and Bantwal taluks. No case had been reported from Mangalore taluk. Mr. Rao, who conducted a ground survey on May 21, found that areas under the Panja and Kadaba primary health centers (PHCs) in Sullia taluk were worst affected. Of the 2100 cases reported, 1300 are from Sullia taluk alone. Many private hospitals have bolstered the efforts of the district Health Department. Mr. Rao said that an early monsoon could cut the breeding cycle of *Aedes aegypti*, a mosquito species that carries the chikungunya virus. "Continuous and heavy rainfall will wash away the larvae and eggs," said Mr. Rao, quoting from a report presented to him by a team of entomologists in the district. The district administration was in the process of fixing a "dry day" to launch a drive to encourage people to empty the water logged at various places, starting from gram panchayat level. This was aimed at cutting the mosquito breeding cycle, Mr. Rao said. In addition, the health workers have been instructed to undertake fogging. (Emerging Infectious Diseases are listed in Category C on the CDC list of Critical Biological Agents) *Non-suspect case

OTHER RESOURCES AND ARTICLES OF INTEREST:

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: <http://bioterrorism.dhmd.state.md.us/>

Contemporary North American avian influenza H7 viruses possess human receptor specificity: implications virus transmissibility Proc Nat Acad Sci 2008 May 27; 105(21):7558-63.

This study found that some North American avian influenza viruses of the H7 subtype show an increased binding to human alpha 2-6 receptors instead of the typical avian preference for alpha 2-3 receptors. These results indicate that some North American avian influenza H7 viruses have acquired binding properties that more closely resemble those of human influenza viruses, suggesting that they may be improving their capacity to infect humans. (<http://www.pnas.org/cgi/content/full/105/21/7558>)

NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

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